

Viewpoints

The Effects of Technological Overload on Children: An Art Therapist's Perspective

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Abstract

Children today are continually bombarded with visual and auditory stimulation, and many make their connections in cyberspace to the detriment of real-time face-to-face encounters with other people. The negative effects of multitasking and technological overload on children and adolescents are discussed in this viewpoint article from the perspective of a family art therapist. The impact of overstimulation on attachment, attention deficit disorder, and interpersonal skills has profound implications for children receiving art therapy.

Introduction

My own experience in various situations has taught me that art therapy can function under all sorts of difficulties. It can endure heat, cold, lack of space and facilities, disorder and violence, but it cannot well endure emptiness. When people's lives are too consistently filled with synthetic living art does not survive easily. (Kramer, 1975, p. 42)

Edith Kramer's article "Art and Emptiness" was written well before its time. When she wrote about synthetic living in 1975, the current prevalence of personal computers, play stations, reality TV, and video games were not even on the horizon. Children today are continually bombarded by visual and auditory stimulation, and are "connected" in cyberspace to the detriment of real-time face-to-face encounters with other people. How does art survive when genuine experiences are pushed aside in favor of computer-generated realities, a cacophony of images invades the visual field, and human interactions take place in cyberspace? More importantly, how do relationships survive?

Multitasking and overstimulation are affecting children today. Consider a few vignettes: Two teenagers are walking

down the street. Both have cell phones stuck to their ears and are talking animatedly, but not to each other. Each is connected to someone someplace else, and is thus not relating to the person a foot away. An adolescent boy is doing his algebra homework while listening to an iPod™ and instant messaging his girlfriend, and none of the tasks is getting his full attention. At the dinner table, a girl is text messaging with her friends, planning for when they will all meet up in an hour. No one asks her to turn off the phone to engage in a here-and-now conversation.

Before continuing with the arguments herein, it is important to note that this article is not anti-technology. Technology has improved communication exponentially for business and personal purposes, making phenomenal leaps in efficiency of information gathering, storage, and research. Technology can positively affect family structures and communication. In art therapy practice, technology has produced some amazing results, particularly with adolescents. However, as wonderful as technology is, art therapists need to look at the unintended consequences of a techno-digital society on the mental health of children and integrate this information into their treatment planning. The detrimental effects of technology on human development and relationships have profound implications for art therapy.

It All Begins With Television

Many children are growing up in front of a television. A national longitudinal survey found that 1-year-old children watched an average of 2.2 hours of television per day, and 3-year-old children watched an average of 3.6 hours (Christakis, Zimmerman, DiGuseppe, & McCarty, 2004). The more television exposure children had, the more likely they were to have attention problems at age 7. A 1-point standard deviation increase in the number of hours of television watched at age 1 is associated with a 28% increase in the probability of having later attention problems.

If pre-school children are spending several hours per day relating to screens and gadgets, it stands to reason that this impacts how they communicate and interact with family members. Research on early brain development demonstrates that during the first few years of life (0–3 years) the brain retains plasticity and malleability, and neural pathways contin-

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ue to develop (Perry, Pollard, Blakely, Baker, & Vigilante, 1995). External stimulation, in the form of holding, gazing, smiling, and talking, helps to stimulate the brain, which develops reciprocally in response to stimulation (Perry, 1997). Plopping a baby in front of a TV, where there is no reciprocal enjoyment and eye-to-eye gazing, is not enough. If the television is being used as a babysitter and is not balanced with quality interactions, the child may not be getting the kind of relational stimulation necessary for optimal brain development.

Time spent watching television is highest among 8- to 10-year-olds; they watch television an average of more than 4 hours per day when one includes videos and recorded shows (Rideout, Roberts, & Foehr, 2005). In primary school, excessive television viewing was found to be positively correlated to social problems, delinquent and aggressive behavior, externalization, and total problem scores on the Child Behavior Checklist (Ozmert, Toyran, & Yurdakok, 2002). During adolescence, excessive television viewing negatively affects educational progress (Johnson, Cohen, Kasen, & Brook, 2007). In Johnson et al.'s study of 678 families, 3 or more hours of television viewing per day at age 14 was associated with negative attitudes toward school, attention problems, long-term academic failure, and less likelihood of pursuing post-secondary education.

...And Then Comes Multitasking

Many children learn early on that they can multitask while watching television. The Kaiser Family Foundation (Rideout et al., 2005) studied media use among 3rd through 12th graders. Children in this randomized sampling spent 6.5 hours per day (44.5 hours per week) engaged with multiple forms of recreational media, including television, videos, music, video games, computers, movies, and various print materials. The time spent "media multitasking" was 28% of media time, so that if one calculated the total media time, including multitasking media, children were engaged the equivalent of 8.33 hours per day! Of the children polled, 61% admitted to multitasking while doing homework (Rideout et al., 2005).

Studies show that people who think they are adept at multitasking often are fooling themselves. Rubinstein, Meyer, and Evans (2001) studied college students' ability to multitask by comparing task completion times when switching between different tasks. They found that time costs increased when switching tasks and were greater when subjects switched to tasks that were unfamiliar or more complex. This suggests that students doing homework while instant messaging, e-mailing, text messaging, and talking on the phone lose concentration time as they switch from one task to another and back to homework.

Multitasking is detrimental to children who have attention deficit disorder (ADHD) as well. Although it may seem adaptive to have developed this condition in today's technological culture of high stimulation and multitasking, in actuality, children with ADHD are not successful with excessive stimulation. A study assessing for inattention through computerized attention tests found that ADHD subjects had a more rapid response style on all tests for attention; however, they committed significantly more errors than the control subjects

(Koschack, Kunert, Derichs, Weniger, & Irle, 2003). Several studies suggest that these kinds of problems remain consistent across different cultures (Siklos & Kerns, 2004; Chan et al., 2006). As the percentage of children diagnosed with ADHD increases, the message for therapists is clear: these children need less, not more, stimulation in order to be successful.

Children's Connections Through Cell Phones

Many adolescents today are used to being "connected" by cell phones and many believe they cannot survive without one. According to NOP World Technology (Elkin, 2005), 75% of 15–17-year-olds in the United States carry cell phones. Most keep their cell phones with them at all times and many keep the phone on all night. The adoption age has shifted downward: Personal cell phone use is now appearing among children from about age 10. The earlier the adoption of the phone, the more prone a user is to giving the cell phone a central place in his or her adult life; these individuals maintain longer lists of phone partners, make more calls, and send more text messages (Geser, 2006). As forms of communication, neither cell phone nor text messaging requires actual physical contact.

Children and adolescents are also communicating in other "connected" venues that were unheard of years ago, which affects friendships in startling ways. An online poll by Harris Interactive (2006) surveyed 1,487 children aged 8–18 years old about what friendship means to children today. Today's teens have e-mail and social networks such as MySpace,TM Facebook,TM instant messaging (IM), and text messaging, all of which allow for relationships where personal connections can be made without face-to-face contact. One third of the teens polled by Harris Interactive revealed that their social network includes "friends" they have never met. When the term "friend" is put in the context of online relationships, adolescents include an average of 75 friends on their online profiles, 52 on their IM buddy lists, 39 on their e-mail contact lists and 38 cell phone contacts (Harris Interactive, 2006). Some children and adolescents have difficulty differentiating between people who are considered "friends," "acquaintances," and "strangers."

In this highly "connected" world, children are not developing sound interpersonal skills. Communication by IM, text messaging, or e-mail is often a shorthand means of relating. Children aren't learning the nuances of interpersonal dialogue, and therefore are lacking sensitivity in relationships. "Don't take this personally..." a child will say, before saying something abrasive and inappropriate. In terms of relationship, the lack of interpersonal skills is alarming. It may not be accidental that aggression in schools is on the rise, considering the fact that children are not learning the nuances of reading facial gestures, understanding tone of voice, and retracting or backing down when miscommunication or misperceptions occur.

Relevance to Art Therapy

Many of the children with whom I work have backgrounds of severe abuse and neglect and have attachment

difficulties. They were deprived of basic human interactions during their earliest years. They would love nothing better than to play on a computer during our art therapy time. It would be easy, and would mean they wouldn't have to relate to me. They want to listen to their iPods™ while we are talking; they insist that they can multitask. It takes effort to keep sessions "unconnected." I have learned to say no because I want to reduce stimulation so that we can relate to each other. In the rare times when I use computers in art therapy, I make sure there is still some "unconnected" time where the client and I can engage in face-to-face contact. I do not want to lose sight of the relational aspect of eye-to-eye gazing, which cannot happen if we are both engaged with a computer screen.

In my work with families of all types, I encourage parents to think carefully about how computers and cell phones are shifting our communication styles, and I encourage parents to make decisions and enforce boundaries regarding the use and prominence of these technologies in their children's lives. One good rule is to not have any important conversations with a child over the phone, where that eye-to-eye gazing is not possible. Children need to relate to our eyes and our words directly in order for us to have an impact on the relational aspect of what we are communicating. Computers and cell phones allow a child the opportunity to disappear and to withdraw further from the family. They can encourage a network of friends that the child's parents have no hope of ever meeting. Just as early attachment as an infant is important, maintaining that attachment communication during adolescence, when the child is most vulnerable to peer influences and risky behavior, is imperative. Children and adolescents need less time in front of screens and more time engaged in direct, genuine interactions with family and real-time friends.

Conclusion

Today's disturbed underprivileged children and adolescents in our large cities are not only deprived of love, understanding, space to live and play in, and exposed to the brutality of the streets; they have also been bribed, seduced, and left empty. They are in a sense all addicts, dependent on synthetic gratifications, which destroy their capacity to seek genuine satisfactions for their emotional needs. (Kramer, 1975, p. 38)

When children are too often engaged in "virtual" conversations through the Internet or text message shorthand, when they are addicted to "reality" television shows that are entirely contrived, when they spend more time engaged in pseudo interactions than eye-to-eye contact, real art doesn't have a chance, just like real relationships don't have a chance. Art becomes another imitative shorthand that echoes the world the child lives in. I would urge art therapists to re-read Kramer's article, "Art and Emptiness," turn off the technological gadgets, and help children make art.

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